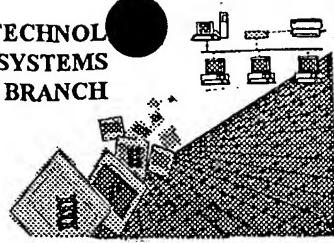


BIOTECHNOLOGY
SYSTEMS
BRANCH



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/511,914
Source: PCP/19
Date Processed by STIC: 10/29/04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>), EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 06/05/04):
U.S. Patent and Trademark Office, 220 20th Street S., Customer Window, Mail Stop Sequence, Crystal Plaza Two, Lobby, Room 1B03, Arlington, VA 22202

Revised 05/17/04

Raw Sequence Listing Error Summary

<u>ERROR DETECTED</u>	<u>SUGGESTED CORRECTION</u>	<u>SERIAL NUMBER:</u> <u>10/511,914</u>
ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE		
1 <input type="checkbox"/> Wrapped Nucleic Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."	
2 <input type="checkbox"/> Invalid Line Length	The rules require that a line not exceed 72 characters in length. This includes white spaces.	
3 <input type="checkbox"/> Misaligned Amino Numbering	The numbering under each 5 th amino acid is misaligned. Do not use tab codes between numbers; use space characters instead.	
4 <input type="checkbox"/> Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.	
5 <input type="checkbox"/> Variable Length	Sequence(s) _____ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.	
6 <input type="checkbox"/> PatentIn 2.0 "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.	
7 <input type="checkbox"/> Skipped Sequences (OLD RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence: (2) INFORMATION-FOR SEQ-ID NO:X: (insert SEQ ID NO where "X" is shown) (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION: SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped	
	Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.	
8 <input type="checkbox"/> Skipped Sequences (NEW RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence. <210> sequence id number <400> sequence id number 000	
9 <input type="checkbox"/> Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.	
10 <input type="checkbox"/> Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence	
11 <input type="checkbox"/> Use of <220>	Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)	
12 <input type="checkbox"/> PatentIn 2.0 "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.	
13 <input type="checkbox"/> Misuse of n/Xaa	"n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid	



PCT

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/511,914

DATE: 10/29/2004
TIME: 11:21:35

Input Set : A:\Sequence listing.txt
Output Set: N:\CRF4\10292004\J511914.raw

```

3 <110> APPLICANT: LOILER, SCOTT A..
4     FLOTTE, TERENCE R.
5     MUZYCZKA, NICHOLAS
6     ATKINSON, MARK A.
8 <120> TITLE OF INVENTION: IMPROVED rAAV VECTORS
10 <130> FILE REFERENCE: 4300.014800
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/511,914
13 <141> CURRENT FILING DATE: 2004-10-18
15 <150> PRIOR APPLICATION NUMBER: PCT/US03/12225
16 <151> PRIOR FILING DATE: 2003-04-17
18 <150> PRIOR APPLICATION NUMBER: 60/373,419
19 <151> PRIOR FILING DATE: 2002-04-17
21 <160> NUMBER OF SEQ ID NOS: 49
23 <170> SOFTWARE: PatentIn version 3.1
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 13
27 <212> TYPE: PRT
28 <213> ORGANISM: Homo sapiens
30 <400> SEQUENCE: 1
32 Ser His Leu Arg Lys Leu Arg Lys Arg Leu Leu Arg Asp
33 1          5          10
36 <210> SEQ ID NO: 2
37 <211> LENGTH: 13
38 <212> TYPE: PRT
39 <213> ORGANISM: Homo sapiens
41 <400> SEQUENCE: 2
43 Ser His Leu Arg Lys Leu Arg Glu Arg Leu Leu Arg Asp
44 1          5          10
47 <210> SEQ ID NO: 3
48 <211> LENGTH: 13
49 <212> TYPE: PRT
50 <213> ORGANISM: Pupaia glis
52 <400> SEQUENCE: 3
54 Ser His Leu Arg Lys Met Arg Lys Arg Leu Leu Arg Asp
55 1          5          10
58 <210> SEQ ID NO: 4
59 <211> LENGTH: 13
60 <212> TYPE: PRT
61 <213> ORGANISM: Bos taurus
63 <400> SEQUENCE: 4
65 Ser His Leu Arg Lys Leu Pro Lys Arg Leu Leu Arg Asp
66 1          5          10
69 <210> SEQ ID NO: 5

```

*Does Not Comply
Corrected Diskette Needed*

pp 2-6

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/511,914

DATE: 10/29/2004
TIME: 11:21:35

Input Set : A:\Sequence listing.txt
Output Set: N:\CRF4\10292004\J511914.raw

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70 <211> LENGTH: 13
71 <212> TYPE: PRT
72 <213> ORGANISM: Homo sapiens
74 <400> SEQUENCE: 5
76 Ser His Leu Arg Lys Leu Arg Gln Arg Leu Leu Arg Asp
77 1 5 10
80 <210> SEQ ID NO: 6
81 <211> LENGTH: 13
82 <212> TYPE: PRT
83 <213> ORGANISM: Canis familiaris
85 <400> SEQUENCE: 6
87 Ser His Met Arg Lys Leu Arg Lys Arg Val Leu Arg Asp
88 1 5 10
91 <210> SEQ ID NO: 7
92 <211> LENGTH: 13
93 <212> TYPE: PRT
94 <213> ORGANISM: Rattus norvegicus
96 <400> SEQUENCE: 7
98 Ser His Leu Arg Lys Met Arg Lys Arg Leu Met Arg Asp
99 1 5 10
102 <210> SEQ ID NO: 8
103 <211> LENGTH: 13
104 <212> TYPE: PRT
105 <213> ORGANISM: Mus musculus
107 <400> SEQUENCE: 8
109 Ser His Leu Arg Arg Leu Arg Arg Leu Leu Arg Asp
110 1 5 10
113 <210> SEQ ID NO: 9
114 <211> LENGTH: 13
115 <212> TYPE: PRT
116 <213> ORGANISM: Synthetic Peptides
118 <220> FEATURE: invalid <213> response - see item 10 on Error summary sheet
119 <221> NAME/KEY: MISC_FEATURE
120 <222> LOCATION: (3)..(3)
121 <223> OTHER INFORMATION: X = Leu or Met
124 <220> FEATURE:
125 <221> NAME/KEY: MISC_FEATURE
126 <222> LOCATION: (5)..(5)
127 <223> OTHER INFORMATION: X = Lys or Arg
130 <220> FEATURE:
131 <221> NAME/KEY: MISC_FEATURE
132 <222> LOCATION: (6)..(6)
133 <223> OTHER INFORMATION: X = Leu or Met
136 <220> FEATURE:
137 <221> NAME/KEY: MISC_FEATURE
138 <222> LOCATION: (7)..(7)
139 <223> OTHER INFORMATION: X = Arg or Pro
142 <220> FEATURE:
143 <221> NAME/KEY: MISC_FEATURE

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/511,914

DATE: 10/29/2004
TIME: 11:21:35

Input Set : A:\Sequence listing.txt
Output Set: N:\CRF4\10292004\J511914.raw

144 <222> LOCATION: (8)..(8)
 145 <223> OTHER INFORMATION: X = Lys, Glu, Gln, or Arg
 148 <220> FEATURE:
 149, <221> NAME/KEY: MISC_FEATURE
 150 <222> LOCATION: (10)..(10)
 151 <223> OTHER INFORMATION: X = Leu or Val
 154 <220> FEATURE:
 155 <221> NAME/KEY: MISC_FEATURE
 156 <222> LOCATION: (11)..(11)
 157 <223> OTHER INFORMATION: X = Leu or Met
 160 <400> SEQUENCE: 9
 W--> 162 Ser His Xaa Arg Xaa Xaa Xaa Xaa Arg Xaa Xaa Arg Asp
 163 1 5 10
 166 <210> SEQ ID NO: 10
 167 <211> LENGTH: 13
 168 <212> TYPE: PRT
 169 <213> ORGANISM: Synthetic Peptides *Name error*
 171 <220> FEATURE:
 172 <221> NAME/KEY: MISC_FEATURE
 173 <222> LOCATION: (3)..(11)
 174 <223> OTHER INFORMATION: X = ANY AMINO ACID
 177 <400> SEQUENCE: 10
 W--> 179 Ser His Xaa Arg Xaa Xaa Xaa Xaa Arg Xaa Xaa Arg Asp
 180 1 5 10
 183 <210> SEQ ID NO: 11
 184 <211> LENGTH: 10
 185 <212> TYPE: PRT
 186 <213> ORGANISM: Homo sapiens
 188 <400> SEQUENCE: 11
 190 Leu Arg Lys Leu Arg Lys Arg Leu Leu Arg
 191 1 5 10
 194 <210> SEQ ID NO: 12
 195 <211> LENGTH: 10
 196 <212> TYPE: PRT
 197 <213> ORGANISM: Homo sapiens
 199 <400> SEQUENCE: 12
 201 Leu Arg Lys Leu Arg Glu Arg Leu Leu Arg
 202 1 5 10
 205 <210> SEQ ID NO: 13
 206 <211> LENGTH: 10
 207 <212> TYPE: PRT
 208 <213> ORGANISM: Tupaia glis
 210 <400> SEQUENCE: 13
 212 Leu Arg Lys Met Arg Lys Arg Leu Leu Arg
 213 1 5 10
 216 <210> SEQ ID NO: 14
 217 <211> LENGTH: 10
 218 <212> TYPE: PRT
 219 <213> ORGANISM: Bos taurus

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/511,914

DATE: 10/29/2004
TIME: 11:21:35

Input Set : A:\Sequence listing.txt
Output Set: N:\CRF4\10292004\J511914.raw

221 <400> SEQUENCE: 14
223 Leu Arg Lys Leu Pro Lys Arg Leu Leu Arg
224 1 5 10
227 <210> SEQ ID NO: 15
228 <211> LENGTH: 10
229 <212> TYPE: PRT
230 <213> ORGANISM: Homo sapiens
232 <400> SEQUENCE: 15
234 Leu Arg Lys Leu Arg Gln Arg Leu Leu Arg
235 1 5 10
238 <210> SEQ ID NO: 16
239 <211> LENGTH: 10
240 <212> TYPE: PRT
241 <213> ORGANISM: Canis familiaris
243 <400> SEQUENCE: 16
245 Met Arg Lys Leu Arg Lys Arg Val Leu Arg
246 1 5 10
249 <210> SEQ ID NO: 17
250 <211> LENGTH: 10
251 <212> TYPE: PRT
252 <213> ORGANISM: Rattus norvegicus
254 <400> SEQUENCE: 17
256 Leu Arg Lys Met Arg Lys Arg Leu Met Arg
257 1 5 10
260 <210> SEQ ID NO: 18
261 <211> LENGTH: 10
262 <212> TYPE: PRT
263 <213> ORGANISM: Mus musculus
265 <400> SEQUENCE: 18
267 Leu Arg Arg Leu Arg Arg Arg Leu Leu Arg
268 1 5 10
271 <210> SEQ ID NO: 19
272 <211> LENGTH: 10
273 <212> TYPE: PRT
274 <213> ORGANISM: Synthetic Peptides
276 <220> FEATURE:
277 <221> NAME/KEY: MISC_FEATURE
278 <222> LOCATION: (1)..(1)
279 <223> OTHER INFORMATION: X = Leu or Met
282 <220> FEATURE:
283 <221> NAME/KEY: MISC_FEATURE
284 <222> LOCATION: (3)..(3)
285 <223> OTHER INFORMATION: X = Lys or Arg
288 <220> FEATURE:
289 <221> NAME/KEY: MISC_FEATURE
290 <222> LOCATION: (4)..(4)
291 <223> OTHER INFORMATION: X = Leu or Met
294 <220> FEATURE:
295 <221> NAME/KEY: MISC_FEATURE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/511,914

DATE: 10/29/2004
TIME: 11:21:35

Input Set : A:\Sequence listing.txt
Output Set: N:\CRF4\10292004\J511914.raw

```

296 <222> LOCATION: (5)..(5)
297 <223> OTHER INFORMATION: X = Arg or Pro
300 <220> FEATURE:
301 <221> NAME/KEY: MISC_FEATURE
302 <222> LOCATION: (6)..(6)
303 <223> OTHER INFORMATION: X = Lys, Glu, Gln, or Arg
306 <220> FEATURE:
307 <221> NAME/KEY: MISC_FEATURE
308 <222> LOCATION: (8)..(8)
309 <223> OTHER INFORMATION: X = Leu or Val
312 <220> FEATURE:
313 <221> NAME/KEY: MISC_FEATURE
314 <222> LOCATION: (9)..(9)
315 <223> OTHER INFORMATION: X = Leu or Met
318 <400> SEQUENCE: 19
W--> 320 Xaa Arg Xaa Xaa Xaa Xaa Arg Xaa Xaa Arg
321 1 5 10
324 <210> SEQ ID NO: 20
325 <211> LENGTH: 10
326 <212> TYPE: PRT
327 <213> ORGANISM: Synthetic Peptides
329 <220> FEATURE:
330 <221> NAME/KEY: MISC_FEATURE
331 <222> LOCATION: (1)..(9)
332 <223> OTHER INFORMATION: X = ANY AMINO ACID
335 <400> SEQUENCE: 20
W--> 337 Xaa Arg Xaa Xaa Xaa Xaa Xaa Arg Xaa Xaa Arg
338 1 5 10
341 <210> SEQ ID NO: 21
342 <211> LENGTH: 18
343 <212> TYPE: PRT
344 <213> ORGANISM: Synthetic Peptides
346 <400> SEQUENCE: 21
348 Asp Trp Leu Lys Ala Phe Tyr Asp Lys Val Ala Glu Asp Leu Asp Glu
349 1 5 10 15
352 Ala Phe
356 <210> SEQ ID NO: 22
357 <211> LENGTH: 28
358 <212> TYPE: PRT
359 <213> ORGANISM: Synthetic Peptides
361 <400> SEQUENCE: 22
363 Leu Arg Lys Leu Arg Lys Arg Leu Leu Arg Asp Trp Leu Lys Ala Phe
364 1 5 10 15
367 Tyr Asp Lys Val Ala Glu Asp Leu Asp Glu Ala Phe
368 20 25
371 <210> SEQ ID NO: 23
372 <211> LENGTH: 28
373 <212> TYPE: PRT
374 <213> ORGANISM: Synthetic Peptides

```

The types of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/511,914

DATE: 10/29/2004
TIME: 11:21:36

Input Set : A:\Sequence listing.txt
Output Set: N:\CRF4\10292004\J511914.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:9; Xaa Pos. 2,5,6,7,8,10,11
Seq#:10; Xaa Pos. 3,5,6,7,8,10,11
Seq#:19; Xaa Pos. 1,3,4,5,6,8,9
Seq#:20; Xaa Pos. 1,3,4,5,6,8,9
Seq#:30; Xaa Pos. 1,3,4,5,6,8,9
Seq#:31; Xaa Pos. 1,3,4,5,6,8,9
Seq#:47; Xaa Pos. 1,2,3,4,5,6,7,8

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/511,914

DATE: 10/29/2004

TIME: 11:21:36

Input Set : A:\Sequence listing.txt

Output Set: N:\CRF4\10292004\J511914.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application Number
L:162 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
L:179 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:320 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0
L:337 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
L:525 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0
L:546 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0
L:754 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47 after pos.:0